**ICS 2210: SYSTEMS ANALYSIS AND DESIGN**

**Assignment 2:**

**This assignment is group-based.**

**Deadline for submission: 19th March 2024**

1. Data Flow Diagram (10 Marks)







1. List as many errors as you can find in the above data flow diagram.
2. Draw a new data flow diagram to correct the errors

(You may add any new process, data store, data and entity as necessary)

1. Given the following narrative description

Read the XYZ Hospital Patient Administration System case below and answer the questions that follow.

**XYZ Hospital Patient Administration System**

When a GP refers a patient for specialist consultancy, the details are entered into the patient file, or if already on file noted as requiring an appointment.

Every afternoon the administrators’ office checks the file and arranges appointments as necessary, by referring to the clinic schedule. Notification of the appointment is sent to the patient, and a list for the session is sent to the specialist.

Following a consultation the specialist writes up the notes, which are added to the patient file. If admission is necessary, the specialist adds the patient’s name to the waiting list, including a code for urgency.

Ward lists are maintained, so that every week the administrators’ office can check the waiting list against predicted bed availability and issue call notices to patients, and a listing to specialists, for admissions in 1 or 2 weeks time. This is always difficult because admissions never go according to schedule, and ward staff have to Attempt to keep lists up to date when something goes wrong.

A final complication is requests from GPs for emergency admissions. These have to be dealt with as they arise, and require an entry in the patient file as usual, then a check on the ward list to find a place. Sometimes a cancellation has to be made, and the patient notified. Notification is sent to the specialist.

**Do the following for the required Information System. State any assumptions you make.**

* 1. Draw the Context Diagram for the XYZ Hospital Patient Administration System.
  2. Develop the leveled DFDs.

(25 Marks)

1. Hi Tech Ltd is a firm based in Nairobi, specializing in various farm equipment sales and operates in the following manner: Hi Tech sends out invoices monthly and will give discounts if payments are made within 10 days. The discounting policy is as follows: If the amount of the order for equipment supplies is greater than $1,000, subtract 4 percent for the order; if the amount is between $500 and $1,000, subtract a 2-percent discount; if the amount is less than $500, do not apply any discount. All orders made via the Web automatically receive an extra 5-percent discount. Any special order (farm chemicals, for example) is exempt from all discounting.
   1. Develop a decision table for Hi Tech Ltd discounting decisions
   2. Develop a decision tree for the Hi Tech Ltd discount policy
   3. Write structured English to solve the Hi Tech Ltd situation

(15 Marks)